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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,879	03/16/2004	Takeshi Ogasawara	JP920030037US1	4484

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EXAMINER	
CHAVIS, JOHN Q	

ART UNIT	PAPER NUMBER
2193	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/801,879

Applicant(s)

OGASAWARA, TAKESHI

Examiner

John Chavis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/10/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. The claimed invention is directed to non-statutory subject matter.

Claims 1 – 12, 14 and 16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result. No physical transformation is recited and additionally, the final result of the claim is merely software components, which is not a tangible result because the components are not embodied within a computing system and executed by a processor or embodied on a computer storage medium. The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. §101.

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf

Claim 1 recites a compiler apparatus; however, none of the components resemble components of an apparatus (processors, registers, computer storage mediums, etc.); while claim 9 specifically claims a program, which is not considered in either statutory classes since it is not a process (method), a machine (an apparatus with components tied to a specific machine), an article of manufacture (tangibly embodied

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product), or a composition of matter. Claims 14 and 16 comprise a computer usable medium; which initially appears to be statutory. However, it appears the applicant is attempting to claim something other than the statutory computer storage medium in claim 15. The dependent claims inherit the defects of its respective parent.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-4, 8-9, 11-16 are rejected under 35 U.S.C. 102(a) as being anticipated by Ogasawara.

What is claimed, is:

Ogasawara

1) A compiler apparatus for optimizing exception handling in a target program as a program to be compiled, comprising:

See the title and the abstract.

an exception handler detection section for detecting, from exception handlers that catch exceptions thrown in said target program,

See the 1st sentence of the abstract and figs. 2 and 3.

a multiple-catching exception handler that catches a plurality of different exceptions and rethrow the caught exceptions;

See item S305 of fig. 3.

an exception selection section for selecting a set of exceptions that

See item S304 of fig. 3.

are to be shifted to common processing through rethrow of the exception by said multiple-catching exception handler from among said plurality of exceptions caught by said multiple-catching exception handler detected; and

an exception handler throw section for throwing a clone exception handler that catches the set of exceptions selected by said exception selection section instead of said multiple-catching exception handler and

shifting it to said common processing.

2) The compiler apparatus according to claim 1, wherein said exception handler throw section throws a branch instruction for causing a shift to said common processing in said clone exception handler and

causes a shift to said common processing with said branch instruction thrown.

3) The compiler apparatus according to claim 1, wherein said exception selection section selects a set of exceptions whose frequency of throw in said multiple-catching exception handler is more than a predetermined reference frequency and which is shifted to said common processing.

4) The compiler apparatus according to claim 3, wherein, as

See items S306 and S307 of fig. 3.
Also, see fig. 6 and sects. 0010.
and 0027.

See the last line of sect. 0027.

This feature is considered represented by the simulation feature (clone) of sect. 0027.

See sect. 0032, especially the part that generates code for a path (shift or Re-throw) exceptions.

See sects. 0026-0029.

“ “ “ “

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a frequency with which exceptions are thrown in said multiple-catching exception handler, said exception selection section detects the number of times that any of said set of exceptions is thrown in said multiple-catching exception handler per the number of execution of said multiple-catching exception handler.

8) The compiler apparatus according to claim 1, wherein said exception handler detection section detects two said multiple-catching exception handlers: one said multiple-catching exception handler and another said multiple-catching exception handler for catching at least one exception thrown in said one multiple-catching exception handler; said exception selection section selects a set of exceptions to be shifted to said common processing by rethrowing an exception caught in said another multiple-catching exception handler from among a plurality of exceptions caught by said one multiple-catching exception handler; and said exception handler throw section throws each of two said clone exception handlers that correspond to each of said two multiple-catching exception handlers and causes each of said corresponding two clone exception handlers to catch

See sects. 0033-0034, 0051-0052, 0054-0055.

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the set of exceptions
selected by said exception
selection section instead of
each of said two multiple-
catching exception handlers.

The features of claims 9 and 13-15 are taught via claim 2 above.

In reference to claims 11-12, see the rejection of claim 8.

As per claim 16, see the rejection of claim 1.

Allowable Subject Matter

5. Claims 5-7 and 10 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The features in claim 5 of having the exception selection section selects said set of exceptions further on condition that depth of nesting of function call from said common processing down to said multiple-catching exception handler is more than a predetermined number; the features of claim 6 wherein the exception selection section selects the set of exceptions further on condition that the number of other exception handlers through which processing shifts from the multiple-catching exception handler to the common processing is more than a predetermined number; and the features of claims 7 and 10 of exception selection section selects said set of exceptions further based on depth of nesting of function call from said common processing down to said multiple-catching exception handler and the number of other exception handlers through

which processing shifts from said multiple-catching exception handler to said common processing are not taught or suggested by the prior art of record.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Chavis whose telephone number is (571) 272-3720. The examiner can normally be reached on M-F, 9:00am-5:30pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JC



John Chavis
Primary Examiner AU-2193